In the Specification

Please substitute the following title:

[HUMAN cDNAs AND PROTEINS AND USES THEREOF]

CYTOGRAM POLYPEPTIDES AND USES THEREOF

Please substitute the following paragraphs:

[0562] A further embodiment of the invention is directed to a composition comprising a polynucleotide sequence encoding a Neurexinal polypeptide fragment having biological activity of binding alpha-latrotoxin, neurexophilin, or dystroglycan.

[0639] In one embodiment, a sequence encoding SEQ ID NO:36 bearing G to A, G to A and A to G substitutions at nucleotide positions 447, 705 and 1040 of SEQ ID NO:35 corresponding to positions 137, 223 and 335, and resulting in the substitution of a glycine residue by a glutamic acid at position 137, a glycine by an aspartic acid at position 223 and an asparagine residue by an aspartic acid at position 335, respectively, can be used for DNA genotyping. Genotyping this locus could be of interest, e.g., in DNA fingerprinting for paternity studies or forensic analyses. It could also be used for genetic association studies, especially in pathologies relating to B cell autoimmune disorders (e.g., rheumatoid arthritis and ulcerative colitis) and antigen presentation disorders (such as bare lymphocyte syndrome).

[0689] Additional aspects of this embodiment include methods of using SAP-MU-10 polypeptides to detect and quantify sphingolipids and gangliosides using techniques common in the art. Such methods comprise the steps of: i) obtaining a biological sample suspected of containing sphingolipids or gangliosides; ii) contacting such sample with a SAP-MU-10 polypeptide under conditions allowing binding of SAP-MU-10; and iii) detecting the presence or absence of sphingolipids and gangliosides by detecting SAP-MU-10. Preferably, the SAP-MU-10 polypeptide is covalently attached to a detectable compound (e.g., enzymatic substrates, or fluorescent,

luminescent, and radioactive compounds) ~~(E.G.,.)~~. Alternatively, a detectable SAP-MU-10-specific antibody may be used to detect SAP-MU-10. This embodiment is useful, for example, as a diagnostic tool for quantifying the amount of sphingolipids in cerebrospinal plasma. Such diagnostic tool may be useful to diagnose sphingolipidosis and various lysosomal storage disorders (LSDs) such as, e.g., cystinosis, Gaucher's disease, multiple sulfatase deficiency, Niemann-Pick disease, Pompe's disease and Wolman's disease.

[0714] Another embodiment relates to a method of producing cytogram polypeptides comprising the steps of: i) obtaining a cell capable of expressing a cytogram polypeptide; ii) growing said cell under conditions suitable to produce said polypeptide; and iii) purifying said polypeptide. The purification of the protein can be done following any technique well-known to those skilled in the art. Preferably, an antibody directed against cytogram or part thereof may be bound to a chromatographic support to form an affinity chromatography column. Even more preferably, the antibody binds to cytogram but not to GMP-17. The cell capable of expressing a cytogram polypeptide may be obtained by any of the techniques well-known to those skilled in the art. A host cell may be transfected with a recombinant expression vector comprising a polynucleotide of the present invention. Alternatively, an heterologous ~~promotor~~ promoter may be used. Preferably, the host cell is a mammalian host cell.

[0981] Compounds that suppress or enhance GENSET gene expression can also be identified using *in vivo* screens. In a typical assay, a test compound is administered (e.g. intravenously, intraperitoneally, intramuscularly, orally, or otherwise) to an animal, at a variety of dose levels, and the effect of the compound on GENSET gene expression is determined by comparing the levels of the mRNA or protein encoded by the gene in tissues known to express the gene of interest, e.g., using Northern blots, immunoassays, PCR, etc. Suitable test animals include, but are not limited to, rodents (e.g., mice and rats), primates, and rabbits. Humanized mice can also be used, that is mice in which the endogenous mouse protein is ablated (knocked out) and the homologous human protein introduced using standard transgenic approaches. Such mice thus express only the human form of a protein. Humanized mice expressing only the human GENSET polypeptide can be used to study *in*

vivo responses to potential agents regulating GENSET protein or mRNA levels. Such transgenic animals are useful for dissecting the biochemical and physiological steps of disease, and for development of therapies for disease intervention (see, e.g., Loring, *et al*, 1996).